

NOMENCLATORIAL NOTES ON NORTH AMERICAN
CYNIPIDAE (HYMENOPTERA)

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The following notes are based primarily on studies of type material in the Collection of the U.S. National Museum of Natural History (USNM), but specimens in the California Insect Survey (CIS) and the California Academy of Sciences (CAS) have also been examined. Much of the information presented here was derived from curatorial work on the USNM cynipoid collection by Dailey during 1977 which was funded by USDA cooperative agreement No. 12-14-1001-1191.

This paper is one of several types of studies needed to achieve a good systematic understanding of the Cynipidae. Associating morphologically dissimilar bisexual and unisexual generations of heterogenous species by controlled rearing of both adults and galls is perhaps the most essential type of study. Clear definition of genera, the most pressing problem in the Cynipidae, is directly dependent upon such investigations. Currently, it is difficult to assess generic limits (i.e. which morphological features are significant at the generic level) because most species are known from only one generation. Species placed in different genera may be found to be alternating generations of one species in controlled rearing studies. For example, *Dryocosmus grumatus* Weld, 1952, proved to be the unisexual generation of *Callirhytis serricornis* (Kinsey), 1922; and *Liodora dumosae* Weld, 1957, proved to be the bisexual generation of *Andricus pattersonae* Fullaway, 1911. Another problem is identifying adults of species described only from galls. At one time many workers regarded names based only on galls as nomina nuda, and subsequently these species names have tended to be ignored. This relates directly to another area in need of attention in the Cynipoidea: Type studies and nomenclature. The many varietal names in the literature compound this problem area. A final problem is that some of the morphological terminology in the Cynipoidea is outdated. Weld used terms which are sometimes ambiguous or not particularly descriptive, and

subsequent workers have tended to perpetuate them. "Weldian terminology" needs to be scrutinized carefully in light of modern morphological usage in the Hymenoptera.

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Xanthoteras clavuloides (Kinsey), **NEW COMBINATION**

Dryophanta clavula Beutenmüller, 1911a:67, ♀, gall. Lectotype ♀, Sonoma Co., Calif. (USNM), present designation. Preoccupied in *Cynips* by *clavula* Osten Sacken, 1865.

Cynips teres var. *clavuloides* Kinsey, 1930:215. New name for *Cynips clavula* (Beutenmüller).

Weld (1951) placed this unisexual species in *Antron*, but because *clavuloides* has a malar groove, it keys to the bisexual generation of *Xanthoteras* in Weld's (1957) generic key to western U.S. cynipids. The absence of a malar groove in *Antron* is a major separation feature from *Xanthoteras* in this key, at least for the bisexual generation. Weld obviously recognized the proper generic assignment of *clavuloides* because it is in his unpublished ms. key to the species of *Xanthoteras* (under the name *clavula*).

The separation of *Xanthoteras* from *Antron* on the basis of the malar groove may work for the bisexual generation, but it is not entirely satisfactory for unisexual forms. *Xanthoteras teres* Weld, a unisexual, micropterous species, does not have a malar groove, but it seems closely related to *X. clavuloides*, a macropterous species, on the basis of a bristly ventral abdominal spine, and similar brown, club-shaped galls. Clearly the generic limits of *Antron* and *Xanthoteras* are in need of study.

Although homonymy between Beutenmüller's and Osten Sacken's species no longer exists, Kinsey's name *clavuloides* must be used under the provisions of Art. 59 of the Code. Beutenmüller described *clavula* from galls and "twelve specimens from Napa and Sonoma Counties." There are 59 adults in the USNM labeled Sonoma Co., 11 of which bear "type" or "cotype" labels. We have chosen the best of the "type" specimens as the lectotype. There is no material labeled Napa County.

Xanthoteras pulchellum (Beutenmüller)

Dryophanta pulchella Beutenmüller, 1911b:357, ♀. Lectotype ♀, Santa Catalina Island, California (USNM), present designation.

Trigonaspis obconica Weld, 1921:202, ♂, ♀, gall. Holotype ♀, Los Gatos, California (USNM). **NEW SYNONYMY.**

In 1930 Weld noted this synonymy on a determination label on material in the USNM, and later in his manuscript key to the species of *Xanthoteras*, but it has never been published. Our examination of the types confirms the synonymy.

Beutenmüller described *pulchella* from two females, one from Santa Catalina Island, and one from Hood River, Oregon, both in the USNM. We have selected the California specimen as lectotype.

Andricus quercusfrondosus (Bassett), **NEW STATUS**

Cynips q. frondosa Bassett, 1865:688, gall. Lectotype gall (USNM), present designation.

Andricus flavohirtus Beutenmüller, 1913:124, ♀, gall. Holotype ♀, Fort Lee, New Jersey (USNM).

The synonymy of these two names was noted by Weld (1959:42) who continued to use Beutenmüller's name for the species, probably because he regarded Bassett's name, based solely on the gall, as a nomen nudum. However, Bassett's name is available (Art. 24 b (iii)). The synonymy was not included in the second supplement to the Hymenoptera Catalog (Weld, 1967).

Although much of Bassett's collection is housed in the Academy of Natural Sciences of Philadelphia, part or all of his type galls of *quercusfrondosa* are in the USNM. Bassett did not give a locality for his species nor is one indicated with the galls, but presumably they originated in Connecticut. Comparison of Bassett's galls with those of *flavohirtus* Beutenmüller shows that Weld's synonymy is correct. We have selected one of Bassett's galls as lectotype.

Bassett's original description is usually cited as 1864, but a footnote on pages 684–685 is dated Jan. 28, 1865. Thus the latter year is the correct date for *quercusfrondosus*.

Andricus truckeensis (Ashmead), **NEW COMBINATION**

Holcaspis truckeensis Ashmead, 1896:127, ♀, gall. Lectotype ♀, Truckee, Calif. (USNM), present designation.

Disholcaspis truckeensis (Ashmead), Weld, 1951:640.

The notauli are complete in *truckeensis* which indicates that this species is more properly placed in *Andricus* than *Disholcaspis*, the latter genus being its most recent assignment. *Andricus truckeensis* is similar to three other species in the genus which have a pubescent thorax, a blunt† mostly ovipositor spine, and which occur on oaks of the subgenus *Protobalanus*: *lasius* (Ashmead), *reniformis* McCracken & Egbert, and *spectabilis* Kinsey (see generic key in Weld, 1957). McCracken & Egbert (1922) suggested that

reniformis might be only a variety of *truckeensis*. Additional studies may indicate that these four species should be placed in a new genus.

Both of Ashmead's females of *truckeensis* are labeled "type" and bear USNM type #3080; consequently we regard them as syntypes and have selected one as lectotype.

The type galls of *truckeensis* bear the rearing number 3769 which indicates that they were sent to Ashmead by Koebele in 1885. They cannot be the galls from which the two adults were reared because the wasps have labels dated 1880. Furthermore, according to Ashmead his two females were reared from galls sent by Comstock (rearing #731). The Koebele galls appear to belong to another western species, *A. reniformis* McCracken & Egbert. Also in the USNM collection there are larger, more ovoid, smooth contoured, tan galls from *Quercus chrysolepis* Leibm. collected by Weld at Kyburz and Idyllwild, California, inside of which he found wasps identical with Ashmead's adults of *truckeensis*. Weld (1957, fig. 80) figured this gall.

Status of *Liodora dumosae* Weld, 1957, and *Andricus kingi* Bassett, 1900

After some rearing experiments which yielded bisexual adults from galls identified as *Liodora dumosae*, Rosenthal and Koehler (1971) reached the conclusion that *dumosae* and *Andricus kingi* Bassett, 1900, were the alternate generations of a single species. Dailey has examined the material of Rosenthal and Koehler's study (CIS) and found that they misidentified their wasp. The specimens are not *dumosae*, but are the previously unknown bisexual generation of *kingi*. The complete scutal notauli and short, straight tip of the galls distinguish the sexual form of *kingi* from that of *dumosae*.

Evans' (1972) rearing studies indicated that *Liodora dumosae* and *Andricus pattersonae* Fullaway, 1911, were the alternate generations of one species. He transferred *pattersonae* to the genus *Liodora*. Some of Evans' paratypes (CAS) have been compared with Weld's paratypes (USNM), and they are the same species.

Callirhytis quercusmedullae (Ashmead)

Cynips q. medullae Ashmead, 1885:viii, ♀, gall. Lectotype ♀, Jacksonville, Florida (USNM), present designation.

Andricus cryptus Ashmead, 1887:145 ♀, gall. Lectotype ♀, Jacksonville, Florida (USNM), present designation. **NEW SYNONYMY.**

Weld noted this synonymy in his unpublished manuscript key to the species of *Callirhytis*, but it has not been established in print. We have examined the types of both species and confirm Weld's synonymy. Two of Ashmead's four syntypes of *quercusmedullae* and one of his two syntypes of *crypta* are extant in the USNM. Lectotype labels have been applied to one of the former and the single specimen of the latter.

The conspicuously swollen twigs from which the types of *quercusmedullae* emerged are quite different from the slender twig which produced the types of *crypta* (see figures 134 and 162 in Weld, 1959). This difference may have been caused by the presence of the inquiline, *Synergus medullae* Ashmead, in the galls of *C. quercusmedullae*. It is known that inquilines can cause modification of the host gall, as happens for example in galls of the bisexual generation of an undescribed Californian species of *Callirhytis* inhabited by *Synergus digressus* McCracken & Egbert.

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Footnote

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